ABSTRACT

In some embodiments, a method and apparatus for automatically parallelizing a sequential network application through pipeline transformation are described. In one embodiment, the method includes the configuration of a network processor into a D-stage processor pipeline. Once configured, a sequential network application program is transformed into D-pipeline stages. Once transformed, the D-pipeline stages are executed in parallel within the D-stage processor pipeline. In one embodiment, transformation of a sequential application program is performed by modeling the sequential network program as a flow network model and selecting from the flow network model into a plurality of preliminary pipeline stages. Other embodiments are described and claimed.